



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number	10/783,249
Filing Date	02/19/2004
First Named Inventor	John L. Fulton
Art Unit	1746
Examiner Name	Michelle Komakov-Nicole Blau
Attorney Docket Number	14138-J

Sheet 1 of 1

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
/N.B./		US- 2002/0086537	7-4-2002	Mullee et al	
		US- 2004/0175948	9--9-2004	DeSimone et al	
		US- 2004/0050406 A1	3-18-2004	Sehgal	
		US- 2004/0055624 A1	3-25-2004	McDermott et al	
		US- 2004/0071873 A1	4-15-2004	DeYoung et al	
		US- 2004/0087174 A1	5-6-2004	Korzenski et al	
		US- 5,868,862	2-9-1999	Douglas et al.	
		US- 6,087,191	7-11-2000	Boggs	
		US- 6,242,165 B1	6-5-2001	Vaartstra	
		US- 6,500,605 B1	12-31-2002	Mullee et al	
/N.B./		US- 6,764,552 B1	7-20-2004	Joyce et al	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
/N.B./		WO02/15251 A1	02-21-2002	Tokyo Electron		

Examiner  
Signature

/Nicole Blau/

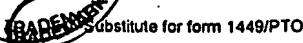
Date  
Considered

08/30/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

**(Use as many sheets as necessary)**

Sheet	1
-------	---

of 2

**Complete if Known**

Application Number	10/783,249
--------------------	------------

Filing Date	02/19/2004
-------------	------------

First Named Inventor	John L. Fulton
----------------------	----------------

Art Unit	1746
----------	------

Examiner Name	<del>Michael Kornakov</del> Nicole Blau
---------------	---

Attorney Docket Number	14138-J
------------------------	---------

## U. S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T
		Country Code <sup>2</sup> Number <sup>4</sup> Kind Code <sup>3</sup> (if known)	MM-DD-YYYY			
/N.B./		WO 02/26921 A1	04-04-2002	Desimone, J.M.		
↓		WO 01/33613 A2	05-10-2001	Schilling, P.E.		
↓		WO 03/065434 A1	08-07-2003	Nakamura, T.		
↓		EP 0 726 099 A2	08-14-1996	Douglas, M. A.		
↓		EP 0 893 166 A1	01-27-1999	Inomata, H.		
/N.B./		EP 1 480 263 A	11-24-2004	Sony Corp.		

Examiner Signature	/Nicole Blan/	Date Considered	08/30/2007
-----------------------	---------------	--------------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

**If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.**

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

**(Use as many sheets as necessary)**

Sheet	2
-------	---

of 2

**Complete if Known**

Application Number	10/783,249
--------------------	------------

Filing Date	02/19/2004
-------------	------------

First Named Inventor	John L. Fulton
----------------------	----------------

Art Unit	1746
----------	------

Examiner Name	Michael Kornakov
---------------	------------------

Attorney Docket Number	14138-J
------------------------	---------

## U. S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	7 <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
/N.B./		EP 1 106 946 A	06-13-2001	Nippon		
/N.B./		WO 02/26921 A	04-04-2002	Univ. of N. C.		
/N.B./		WO/1033613 A	05-10-2001	Tokyo Electron		

**Examiner  
Signature**

/Nicole Blan/

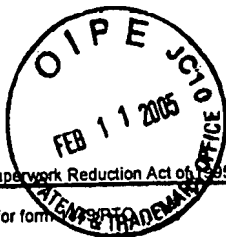
Date Considered

08/30/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form PTO/SB/08A

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number	10/783,249
Filing Date	02/19/2004
First Named Inventor	John L. Fulton
Art Unit	1746
Examiner Name	Michael Komarow Nicole Blau
Attorney Docket Number	14138-J

Sheet 1 of 9

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
/N.B./		US- 5,470,802	11-28-1995	Gnade et al.	
		US- 5,488,015	01-30-1996	Havemann et al.	
		US- 5,494,858	02-27-1996	Gnade et al.	
		US- 5,522,938	06-04-1996	O'Brien	
		US- 5,561,318	10-01-1996	Gnade et al.	
		US- 5,736,425	04-07-1998	Smith, et al.	
		US- 5,747,880	05-05-1998	Havemann et al.	
/N.B./		US- 5,804,508	09-08-1998	Gnade et al.	
		US- 5,807,607	09-15-1998	Smith et al.	
		<del>US- 5,868,862</del>	<del>02-09-1999</del>	<del>Douglas et al.</del>	
/N.B./		US- 5,908,510	06-01-1999	McCullough et al.	
		US- 5,914,183	06-22-1999	Canham	
		US- 5,955,140	09-21-1999	Smith et al.	
		US- 6,024,801	02-15-2000	Wallace et al.	
		US- 6,149,828	11-21-2000	Vaartstra	
		US- 6,171,645 B1	01-09-2001	Smith et al.	
		US- 6,242,165 B1	06-05-2001	Vaartstra	
/N.B./		US- 6,277,753 B1	08-21-2001	Mullee et al.	
		US- 6,286,231 B1	09-11-2001	Bergman et al.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>3</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
/N.B./		JP02001122	6/9/1988	Matsushita Elec		
		JP02113525	10/24/1988	Matsushita Elec		
		JP20011107	10/12/1999	Matsushita Elec		
		JP2000357686 A2	01/27/2000	Matsushita Elec		
		JP02098928A2	10/05/1988	Tokyo Electron		
/N.B./		JP03261128A2	03/09/1990	Sumitomo Seika		

Examiner Signature	/Nicole Blau/	Date Considered	08/30/2007
--------------------	---------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number	10/783,249
Filing Date	02/19/2004
First Named Inventor	John L. Fulton
Art Unit	1746
Examiner Name	Michael Komakov Nicole Blau
Attorney Docket Number	14138-J

Sheet 2 of 9**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
/N.B./		US- 6,306,564 B1	10-23-2001	Mullee	
		US- 6,319,858 B1	11-20-2001	Lee et al	
		US- 6,331,487 B2	12-18-2001	Koch	
		US- 6,346,484 B1	01-12-2002	Cotte et al.	
		US- 6,357,142 B1	03-19-2002	Bergman et al.	
		US- 6,358,673 B1	03-19-2002	Namatsu	
		US- 6,361,696 B1	03-26-2002	Spiegelman et al.	
		US- 6,380,105 B1	04-30-2002	Smith et al	
		US- 6,398,875 B1	06-04-2002	Cotte et al	
		US- 6,425,956 B1	07-30-2002	Cotte et al	
		US- 2002/0001929A1	01-03-2002	Biberger et al.	
		US- 20010010306A1	08-02-2001	Morita	
		US- 20020012884A1	01-31-2002	Gleason et al.	
		US- 20020026729A1	03-07-2002	Bergman et al.	
		US- 20010037860A1	11-08-2001	Morita	
		US- 20010041459A1	11-15-2001	Smith et al.	
		US- 20020083959A1	07-04-2002	Morita et al.	
		US- 20020088477A1	07-11-2002	Cotte et al.	
		US- 20020090458A1	07-11-2002	Cotte et al.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	†
		Country Code <sup>3</sup> "Number" "Kind Code <sup>5</sup> (if known)				
/N.B./		JP11011930A2	06-25-1997	Matsushita Elec		
		EP 0 512 401 A3	11-11-1992	IBM		
		EP 0 684 642 A1	11-29-1995	Bruce E. Gnade		
		EP 0 684 642 B1	12-19-2001	Chih-Chen Cho		
		EP 0 687 004 A1	12-13-1995	Chih-Chen Cho		
		EP 0 688 052 A3	08-28-1996	Shin-Puu Jeng		

Examiner  
Signature

/Nicole Blau/

Date  
Considered

08/30/2007

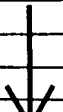
\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)		Application Number	10/783,249
		Filing Date	02/19/2004
		First Named Inventor	John L. Fulton
		Art Unit	1746
		Examiner Name	Michael Komakov Nicole Blau
Sheet 3 of 9	Attorney Docket Number	14138-J	

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		<del>US-20020090450A1</del>	<del>07-11-2002</del>	<del>Gotto et al.</del>	
/N.B./		US-20020095816A1	07-25-2002	Bergman et al.	
/N.B./		US-20020112740A1	08-22-2002	DeYoung et al.	
/N.B./		US-2002/0112746 A1	08-22-2002	DeYoung et al.	
/N.B./		US-20020112747A1	08-22-2002	DeYoung et al.	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
/N.B./		EP 0 727 711 A3	04-09-1997	Medhat A Toukhy		
		EP 0 733 269 B1	01-16-2002	L.T. Canham		
		EP 0 746 013 A2	12-04-1996	Texas Instrumen		
		EP 0 836 895 A3	09-16-1998	IBM		
		EP 0 992 852 A2	04-12-2000	Nippon Telegrap		
/N.B./		EP 1 024 524 A2	01-25-2000	Kiyoyuki Morita		

Examiner Signature	/Nicole Blau/	Date Considered	08/30/2007
--------------------	---------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for form 1449/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT.

**(Use as many sheets as necessary)**

Sheet	4	of	9
-------	---	----	---

**Complete if Known**

Application Number	10/783,249
Filing Date	02/19/2004
First Named Inventor	John L. Fulton
Art Unit	1746
Examiner Name	<del>Michail Komakov</del> Nicole Blain
Attorney Docket Number	14138-J

## U. S. PATENT DOCUMENTS

[illegible]

**FOREIGN PATENT DOCUMENTS**

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>2</sup>
		Country Code <sup>3</sup> "Number" <sup>4</sup> "Kind Code" <sup>5</sup> (if known)	MM-DD-YYYY			
/N.B./		EP 1 106 946 A2	06-13-2001	Nippon Telegrap		
↓		EP 1 106 946 A3	04-10-2002	Namatsu Hideo		
		WO 01/33613 A2	05-10-2001	Supercritical S		
		WO 01/51866 A1	07-19-2001	Semitool, Inc.		
		WO 01/51990 A1	07-19-2001	Semiconductor		
		WO 01/82368 A2	11-01-2001	Tokyo Electron		

Examiner Signature	/Nicole Blan/
-----------------------	---------------

Date Considered	08/30/2007
-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

**(Use as many sheets as necessary)**

Sheet 5

5

of

9

**Complete if Known**

Application Number	10/783,249
--------------------	------------

Filing Date	02/19/2004
-------------	------------

First Named Inventor	John L. Fulton
----------------------	----------------

Art Unit	1746
----------	------

Examiner Name	<del>Michael Kemakov</del> Nicole Blau
---------------	--

Attorney Docket Number	14138-J
------------------------	---------

## U. S. PATENT DOCUMENTS

[illegible]

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number* Kind Code <sup>6</sup> (if known)	MM-DD-YYYY			
/N.B./		WO 01/87505 A1	11-22-2001	S.C. Fluids Inc		
/N.B./		WO 02/11191 A2	02-07-2002	The Deflex Corp		
		<del>WO 02/16261 A1</del>	<del>02-21-2002</del>	<del>Tokyo Electron</del>		
/N.B./		WO 02/17373 A1	02-28-2002	Advanced Micro		
/N.B./		WO 95/13132	05-18-1995	Gillette Comp.		
/N.B./		WO 95/16280	06/15/1995	Sec. of State		

**Examiner  
Signature**

/Nicole Blan/

Date  
Considered

08/30/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \*Applicant's unique citation designation number (optional). \*See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. \*Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). \*For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \*Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. \*Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known.**

Sheet 6

of

9

Application Number	10/783,249
Filing Date	02/19/2004
First Named Inventor	John L. Fulton
Art Unit	1746
Examiner Name	<del>Michael Komakov</del> Nicole Blan
Attorney Docket Number	14138-J

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
/N.B./		JANG, W. I., et al. Fabrication of MEMS devices by using anhydrous HF gas-phase etching with alcoholic vapor, J.Micromech Microeng: 12 (2002) pp 297-306	
		CUBICCIOTTI, D., Pourbaix Diagrams for Mixed Metal Oxides-Chemistry of Copper in BWR Water, Corrosion-Vol. 44, No. 12, pp. 875-880	
		HELMS, R.C., et al., The Physics and Chemistry of SiO <sub>2</sub> and the Si-SiO <sub>2</sub> Interface 2, 181st mtg of Electrochemical Society, May 17-22, 1992, pp 253-265	
		DABROWSKI, J., Silicon Surfaces and Formation of Interfaces, World Scientific, Chapter 5, Adsorption on Silicon Surfaces(2000) pp 262-307	
		RITTER, S.K., Microchips' Heavy Burden, Science & Technology, December 23, 2002, Vol. 80 # 51, pp 1-6	
		AIR PRODUCTS, ACT BNE-8500 brochure, Etch Residue Remover, ACT Electronic Chemicals, (4 pgs)	
		AIR PRODUCTS, ACT NE-28 brochure, Etch Residue Remover, ACT Electronic Chemicals, (5 pgs)	
		CAMPBELL, M.L., et al., Metal Extraction from Heterogeneous Surfaces Using Carbon Dioxide Microemulsions, Langmuir 2001, vol. 17 pp 5458-5463	
↓		CHEN, Z., et al., Increased Copper Outplating from Dilute HF Solutions on Microstructurally Modified Silicon Surfaces, Jour of Electrochemical Soc. 147 (10) 3889-3891 (2000)	
/N.B./		COMBES, J.R., et al., Chemical Modification of Metal Oxide Surfaces in Supercritical CO <sub>2</sub> , Amer. Chem Soc 1999, pp 7870-7875	

Examiner  
Signature

/Nicole Blan/

Date  
Considered

08/30/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including the gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitution for form 1449/PTO  <b>INFORMATION DISCLOSURE          STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Complete if Known</b>	
		Application Number	10/783,249
		Filing Date	02/19/2004
		First Named Inventor	John L. Fulton
		Art Unit	1746
		Examiner Name	<del>Michael Komakov</del> <b>Nicole Blan</b>
Attorney Docket Number	14138-J		
Sheet	7	of	9

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
/N.B./		KALER, E.W., et al., A Small Angle Neutron Scattering Study of Intermicellar Interactions in Microemulsions of AOT, Water, and Near-Critical..., J. Phys Chem 1991, 95, 458-462	
		LEE, yong-Il, et al., Dry Release for Surface Micromachining with HF Vapor-Phase Etching, J. Microelectromechanical sys, v.6, #3, September 1997, pp 226-233	
		LIU, J., et al., A new strategy for supercritical fluid extraction of copper ions, Talanta 53 (2001) 1149-1154	
		MCCLAIN, J.B., et al., Design of Nonionic Surfactants for Supercritical Carbon Dioxide, Science, Vol 274, 20 December 1996, pp 2049-2052	
		NAMATSU, H., Dimensional limitations of silicon nanolines resulting from pattern due to surface tension of rinse water, Appl Phys Lett 66 (20) 15 May 1995 pp 2655	
		NAMATSU, H, et al., Supercritical resist dryer, J. Va. Sci. Technol. B 18(2) Mar/Apr 2000 pp 790-784	
		NAMATSU, H., et al., Supercritical Drying for Nanostructure Fabrication without Pattern Collapse, Microelectronic Eng. 46 (1999) 129-132	
		PETERS, D., et al., Development of Fluoride-Containing Solvent-Based Strippers, Future Fab International Issue 14, Section 6 (5 pgs)	
↓		SHKROB, I.A., Solvent Anions in Supercritical Carbon Dioxide: Formation of Complexes with Polar Solutes, J. Phys. Chem. B 2001, 105, 7027-7032	
/N.B./		SUNI, I.I., et al. Dissolution Kinetics for Atomic, Molecular and Ionic Contamination from Silicon Wafers during Aqueous Processing-J. Electrochemical Soc. 146(9) 3522-3526-1999	

Examiner Signature	/Nicole Blan/	Date Considered	08/30/2007
--------------------	---------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Complete if Known</b>	
		Application Number	10/783,249
		Filing Date	02/19/2004
		First Named Inventor	John L. Fulton
		Art Unit	1746
		Examiner Name	<del>Michael Kornak</del> <b>Nicole Blan</b>
Sheet 8 of 9	Attorney Docket Number		14138-J

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
/N.B./		CONSANI, K.A., Observations on the Solubility of Surfactants and Related Molecules in Carbon Dioxide at 50 °C, Journal of Supercritical Fluids, 1990, 3, 51-65	
		DONG, X., Phase Behavior and Micelle Size of an Aqueous Microdispersion in Supercritical CO <sub>2</sub> with a Novel Surfactant, Ind. Eng. Chem Res 2002, 41, 1038-1042	
		EKC525tm Cu, EKC Copper Integration Technology Brochure, EKC Technology, Dupont Electronic Technologies, 1 page	
		SAC tm (semi-aqueous chemistry) Remover, EKC Technology, Dupont Electronic Technologies, 1 page	
		ENICK, R., et al., Phase behavior of CO <sub>2</sub> -perfluoropolyether oil mixtures and CO <sub>2</sub> -perfluoropolyether chelating agent mixtures, Jour of Supercritical Fluids 13 (1998) 121-126	
		FINK, R., et al., Toward the Development of "CO <sub>2</sub> -philic" Hydrocarbons. 1. Use of Side-Chain Functionalization to Lower .... J. Phys Chem B. 1999, 103, 6441-6444	
		Francis, A. W., Ternary Systems of Liquid Carbon Dioxide, pp. 1099-1114, Dec 1994	
		FULTON, J.L., et al., Aggregation of Amphiphilic Molecules in Supercritical Carbon Dioxide: A Small Angle X-ray Scattering Study, Langmuir 1995, 11, 4241-4249	
		HARRISON, K. et al., Water-in-Carbon Dioxide Microemulsions with a Fluorocarbon-Hydrocarbon Hybrid Surfactant, Langmuir 1994, 10, 3536-3541	
/N.B./		Ji, M., et al., Synthesizing and Dispersing Silver Nanoparticles in a Water-in-Supercritical Carbon Dioxide Microemulsion, J. Am. Chem Soc 1999, 121, 2631-2632	

Examiner Signature	/Nicole Blan/	Date Considered	08/30/2007
--------------------	---------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.  
 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.  
 This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Complete if Known</b>	
		Application Number	10/783,249
		Filing Date	02/19/2004
		First Named Inventor	John L. Fulton
		Art Unit	1746
		Examiner Name	<del>Michael Kornakov</del> Nicole Blan
Sheet 9	of 9	Attorney Docket Number	14138-J

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
/N.B./		YEE, G.G., et al., Fourier Transform Infrared Spectroscopy of Molecular Interactions of Heptafluoro-1-butanol or 1-Butanol in Supercritical..., J. Phys Chem 1992, 96, 6172-6181	
		YONKER, C.R, Solution Dynamics of Perfluorobenzene, Benzene, and Perdeuteriobenzene in Carbon Dioxide as a Function of Pressure and Temperature, J. Phys Chem A 2000, 104, 685-691	
		ZIELINSKI, R.G., A Small-Angle Neutron Scattering Study of Water in Carbon Dioxide Microemulsions, Langmuir 1997, 13, 3934-3937	
		DESIMONE, J.M., et al. Dispersion Polymerizations in Supercritical Carbon Dioxide, Science, Vol. 265, 15 Jul 1994, pp 356-359	
		HIGASHI, G.S., Understanding the Surface Chemical and Structural Implications of HF Solution Cleaning of Silicon pp 187-197	
		OHMI, T, et al., Dependence of Surface Microroughness on Types of Silicon Substrates, Phys and Chem of SiO <sub>2</sub> and SiO <sub>2</sub> /Si interface 2, New York: Plenum Press: 1993 pp257-265	
/N.B./		LEE, C.S, et al, Modeling & Characterization of Gas-Phase Etching of Thermal Oxide & TEOS Oxide Using Anhydrous HF & CH <sub>3</sub> OH; J. Electrochem. Soc, Vol. 143, No. 3, Mar 1996, 1099-1103	

Examiner Signature	/Nicole Blan/	Date Considered	08/30/2007
--------------------	---------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.